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Factors Affecting the Compulsory Basic Immunization Status of Children in Harapan Health Centre of East Sentani District, Jayapura Regency 2015

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Abstract

Basic immunization is the first immunization given to all people, especially infants and toddlers from birth to protect the body from hazard diseases. The immunization coverage in the District East Sentani in 2014 were two villages that did not achieve the target of universal child immunization (UCI) is the Yokiwa village, the BCG immunization coverage was 13%, DPT-HB3 was 17%, Polio 4 was 22% and coverage of the Asei village for DPT-HB 3 was 70%, and Measles was 4%. This research aims analysis the factors that affect the status of compulsory basic immunization on infant. This study is a quantitative research that applied conducted by a cross sectional study. It conducted in Harapan Health centre of East Sentani District in Jayapura Regency from May to July 2015. Bivariate Analysis show no influence age of mother results obtained with basic mandatory immunization status (p = 0.009), there is the effect of mother's education level with the status of basic immunization required (p = 0.012).

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Then, there was no effect of employment status of mothers with immunization status and compulsory primary with (p = 1.000), there is the influence of resources to immunization status and compulsory primary where (p = 0.003), No effect of the mother's level of knowledge of basic compulsory immunization status with (p = 0.009) there is the influence of maternal attitude to mandatory basic immunization status with (p = 0.028).

Keywords: Infant; Compulsory Basics Immunization; Health Centre.

1. Introduction

Babies who are born with a high risk of developing deadly infectious diseases such as Tuberculosis, Diphtheria, Pertusis, Tetanus, Polio, Hepatitis B and many other diseases that sometimes appear on and off [1]. More than 1.4 million children in the world die from diseases that could be prevented by immunization. Achievement of the target of universal child immunization (UCI) in Indonesia is the highest at 100%, ie DI Yogyakarta, Jakarta and Jambi, then followed by Lampung amounted to 99.27%. The province of Papua has the lowest achievement of 13.05%, followed by West Papua by 41.21% and amounted to 56.50% Southeast Sulawesi (Indonesia Health Profile, 2013).

Data of (Regional Health Research) Riskesdas 2010, Papua Province has the lowest immunization coverage for immunization include BCG (53.6%), measles (47.1%) and polio 4 (40.5%).

Indicators of the success of immunization programs based on minimum service standards (SPM) basic health is achieving the target of universal child immunization (UCI) basic immunization coverage mandatory, namely BCG, DPT, Polio, Measles and Hepatitis B should reach 100%, both at the national, provincial and district and even in every village [2]. Achievement of immunization coverage in the Eastern District of Sentani there are two villages did not achieve the target of universal child immunization (UCI), the village Yokiwa with achieving immunization coverage of BCG = 13%, DPT-HB3 = 17%, Polio 4 = 22% and Asei village of the achievement of immunization coverage DPT-HB 3 = 70%, Measles = 4% [3].

Based on the above matters researchers are interested and want to examine the factors that affect the status of compulsory primary immunization in infants in the Harapan District of East Sentani district, Jayapura.

2. Theoretical Overview

Immunization is an attempt immunity in infants and children by incorporating the vaccine into the body so that the body makes antibodies to prevent against certain diseases [4].

In Indonesia, there are five types of immunizations are required by the government and there is also mandatory in Indonesia. Immunization only as required by the WHO, namely BCG, DPT, Polio, Measles and Hepatitis B [4]. The purpose of immunization is expected that children become immune to the disease so as to reduce morbidity and mortality, can reduce disability from diseases preventable by immunization schedule as follows:

Table 1: Schedule Primary Immunization Giving [5].

Vaccine	Immunization	Period of giving	Age	Note
BCG	1 x	-	0 – 11month	For baby who birth in hospital they can be given hepatitis B, BCG and polio immediately.
DPT	3 x (DPT 1, 2, 3)	4 week	2 - 11 month	
Polio	4 x (Pol 1, 2, 3)	4 week	0 - 11 month	
Measles	1 x	-	9 - 11 month	
Hep B	3 x (Hep B 1, 2, 3)	4 week	0 - 11 month	

3. Materials and Methods

This type of research is quantitative research conducted by applied a cross sectional study in Harapan Health Centre of East Sentani District, Jayapura Regency Papua Province in May - July 2015. Independent variables in this study were age, education level, employment status, resources, knowledge and attitudes. While the dependent variable is the status of compulsory primary immunization in infants.

The population is all the mothers who have children aged 12-59 months in Harapan Health Centre totaling 773. The sample size was calculated with the following formula that is numbered 264.Teknik sample used is stratified sampling that taken from the village 7 located in Harapan Health Centre of East Sentani District. The data source is primary data obtained from the questionnaire research and secondary data obtained from health card, KIA, health center report data, report data District Health Office Jayapura. Data that had been collected were processed and analyzed with SPSS computerized system through editing , coding, entry, cleaning and analysis of the data and presented in tabular form and narrative. Data analysis included analysis of univariat form of frequency distribution and percentage of each variable, analisis bivariat using chi-square test and multivariate analysis using multiple logistic regression. The calculation result then significated with an alpha value of 0.05. If the value of p <alpha (0.05) then the decision is Ho rejected and if p ≥ alpha (0.05) then the decision is Ho accepted.

4. Results

Univariate analyzes performed on each of the research variables including age, education level, employment status, resources, knowledge, attitude and compulsory basic immunization in infants.

1. Distribution of Respondents by Age.

Based on the below table it is known that respondents with age <20 years were 30 (11%) and age> 20 years amounted to 234 people (89%).

Table 2: The distribution of age of respondents (mother) in the working area of the Harapan Health Center, East Sentani District 2015

No	Knowledge level	*n*	%
1	< 20 year	30	11
2	> 20 year	234	89
Total		264	100

2. Distribution of Respondents by Education Level

Table 3: Frequency distributions of educational level of respondents (mother) in the working area of the District of Harapan Health Center ,East Sentani 2015

No	Education level	*n*	%
1	Low	221	84
2	High	43	16
Total		264	100

Table describe an overview of the respondents' education level. The data illustrates that respondents who have a low education was 221 people (84%) and highly educated was 43 people (16%).

3. Distribution of Respondents by Job Status

Table 4: Distribution of the frequency of respondents work status (mother) in the working area of the Harapan Health Center, East Sentani District 2015

No	Occupational stats	*N*	%
1	Work	41	16
2	Not work / household mother	223	84
Total		264	100

Based on table , it is known that the employment status of the respondents who have worked as many as 41 people (16%) and employment status does not work / IRT that 223 people (84%).

4. Distribution of Respondents by Resources

Table 5: Distribution of frequency resources respondent (mother) in the working area of the Harapan Health Center, East Sentani 2015

No	Information Source	*n*	%
1	Non health staff	190	72
2	Health staff	74	28
Total		264	100

Based on the table above, it is known that the source of information on immunization were obtained by respondents from non personnel health officials as many as 190 people (72%) and from health officials as many as 74 people (28%).

5. Distribution of Respondents by Level of Knowledge

Table 6: Distribution of the frequency of the level of knowledge (the mother) in the working area of the Harapan Health Center East, District of Sentani 2015

No	Knowledge Level	*n*	%
1	Less	192	73
2	Good	72	27
Total		264	100

Based on the table , it is known that the rate of respondents who have less knowledge as much as 192 people (73%) and a good level of knowledge as much as 72 people (27%).

6. Distribution of respondents by attitude

Table 7: Distribution of the frequency of the attitude of the respondent (mother) in the working area of the Harapan Health Center East, District of Sentani 2015

No	Attitude	*n*	%
1	Less	10	4
2	Good	254	96
Total		264	100

Based on the above table it can be seen that respondents who have an attitude of less than 10 people (4%) and have a good attitude 254 (96%).

7. Distribution of Respondents by Mandatory Basic Immunization Status In Toddlers

Table 8: Distribution of the frequency of mandatory basic immunization status of children under five in 2015

No	Status of compulsory basic immunization	*n*	%
1	Not complete	67	25
2	Complete	197	75
Total		264	100

Based on the above table it is known that the status of mandatory basic immunization in infants who did not complete that 67 people (25%) and having a basic immunization status shall complete that 197 people (75%).

Bivariate analysis in this study obtained the following results:

a. Relationship Age Mother With Mandatory Basic Immunization Status In Toddlers

Table 9: Relationship of maternal age with compulsory basic immunization status in toddlers

Age	Mandatory Basic Immunization Status				Total		p value
	Not complete		Complete				
	n	%	n	%	n	%	
<20 Year	14	46,7	16	53,3	30	100	0,009
> 20 year	53	22,6	181	77,4	234	100	
Total	67	25,4	197	74,6	264	100	

Based on the table above, note that of the 30 respondents aged <20 years, 14 respondents have incomplete immunization status and 16 respondents have complete. Whereas immunization status of 234 respondents aged> 20 years 53 respondents have incomplete immunization status and 181 respondents have complete immunization status.

b. Relationship Education Level Mother With Mandatory Basic Immunization Status In Toddlers

Table 10: Relationship level of maternal education with compulsory primary immunization status in toddlers

Education level	Mandatory Basic Immunization Status				Total		p value
	Not complete		Complete				
	n	%	n	%	n	%	
Low	49	22,2	172	77,8	221	100	0,012
High	18	41,9	25	58,1	43	100	
Total	67	25,4	197	74,6	264	100	

Based on the table above, note that of the 221 respondents who have a low education level 49 respondents have immunization status is incomplete and 172 respondents have the status of full immunization while the 43 respondents who have higher education, 18 respondents have immunization status is incomplete and 25 respondents have status complete immunization.

Based on the above data, it is known that p-value of 0.012 (p value <0.05), then Ho is rejected, meaning that there is a correlation between level of education and the status of compulsory primary immunization in infants.

c. Mothers Work relationship with the Mandatory Basic Immunization Status In Toddlers

Table 11: Relationship maternal employment status with the status of compulsory primary immunization in infants

occupation	Mandatory Basic Immunization Status				Total		p value
	Not complete		Complete				
	n	%	n	%	n	%	
Work	10	24,4	31	75,6	41	100	1.000
Not work /household	57	25,6	166	74,4	223	100	
Total	67	25,4	197	74,6	264	100	

Based on the table above, note that of the 41 respondents who have the status of a job working 10 respondents have incomplete immunization status and 31 respondents have complete immunization status. While the 223 respondents who have not worked a job status / IRT 57 respondents have incomplete immunization status and 166 respondents have complete immunization status.

Based on the above data, it is known that p-value 1.000 (p value> 0.05) hence Ho accepted meaning there is no relationship between employment status with the status of compulsory primary immunization in infants.

d. Resources relationship with the Mandatory Basic Immunization Status In Toddlers

Table 12: Relationship with state resources and compulsory primary immunization in infants

Information sources	Mandatory Basic Immunization Status				Total		p value
	Not complete		Complete				
	n	%	n	%	n	%	
Not health staff	58	30,5	132	69,5	190	100	0,003
Health staff	9	12,2	65	87,8	74	100	
Total	67	25,4	197	74,6	264	100	

Based table its noted that of the 190 respondents to obtain resources from health bukanpetugas 58 respondents have incomplete immunization status and 132 respondents have complete immunization status.

Note also of the 74 respondents to obtain resources from health care workers 9 respondents have incomplete immunization status and 65 respondents have complete immunization status. Based on the above data, it is known that p-value of 0.003 (p-value <0.05), then Ho is rejected, meaning that there is a relationship between the state resources and compulsory primary immunization in infants.

e. Knowledge Level relationship Mother With Mandatory Basic Immunization Status In Toddlers

Table 13: Relationship with the mother's level of knowledge of basic compulsory immunization status in toddlers

knowledge level	Mandatory Basic Immunization Status				Total		p value
	Not complete		Complete				
	n	%	n	%	N	%	
Low	40	20,8	152	79,2	192	100	0,009
High i	27	37,5	45	62,5	72	100	
Total	67	25,4	197	74,6	264	100	

Based on table it is noted that of the 192 respondents who had a low level of knowledge, 40 respondents have incomplete immunization status and 152 respondents have complete immunization status. While the 72 respondents who have a high level of knowledge, 27 respondents have incomplete immunization status and 45 respondents have complete immunization status.

Based on the above data, it is known that p-value 0.009 (p-value <0.05), then Ho is rejected means that there is a correlation between the level of knowledge of the basic compulsory immunization status in infants.

f. Mother With Attitude Relationship Status Mandatory Basic Immunization In Toddlers

Table 14: Relationship with the mother's attitude immunization status Attitude Mandatory Basic Immunization Status Total Value p value

Attitude	Mandatory Basic Immunization Status				Total		p value
	Not complete		Complete				
	n	%	n	%	n	%	
Less	6	60,0	4	40,0	10	100	0,028
Good	61	24,0	193	76,0	254	100	
Total	67	25,4	197	74,6	264	100	

Based on the table above, note that of the 10 respondents who have less attitude, 6 respondents have incomplete immunization status and 4 respondents have complete immunization status. While the 254 respondents who have a good attitude, 61 respondents have incomplete immunization status and 193 respondents have complete immunization status. Based on the above data, it is known that p-value 0.028 (p value <0.05), then Ho is rejected means that there is a relationship between attitudes to the status of mandatory basic immunization in infants.Multivariate analysis with multiple logistic regression is used to obtain an answer which is most dominant factor influencing compulsory primary immunization status. Logistic regression analysis results obtained are significantly the most dominant factor affecting the status of basic immunization is the age of the value of exp (B) 3,947 and the value CI 95% (1679 to 9276).

5. Discussion

5.1. Relationship Age Mother With Mandatory Basic Immunization Status in Toddlers

Based on the results of the study showed no significant relationship between maternal age with compulsory primary immunization status of children under five. It is based on the analysis results obtained chi-square test p = 0.009 (p <0.05). The results are consistent with research by [6], which states that there is a relationship of maternal age on the completeness of basic immunization status of children in the village of the District Balegondo Ngariboyo Magetan indicated with p = 0.034.is an age of transition between childhood and adulthood that include changes in the biological, cognitive, social, emotional and at risk included in readiness for a pregnant woman to be ready physically, emotional, psychological, social and economic [7].

The older a person will have the opportunity and a longer time in getting information and knowledge. Thus the older the mother, the level of knowledge about basic compulsory immunization in infants, the better. Psychological maturity that has not been achieved at this age will make a stressor severe enough for him, where friends of his age still fun to learn and play a young mother had been busy with the affairs of the baby. This situation will make a mother neglect her baby, including health problems by not carrying a baby for immunization. This state of affairs can lead babysitting handed over to his grandmother.

5.2. Relationship Education Level Mother With Basic Compulsory Immunization Status In Toddlers

Based on the results of the study showed no effect between the level of education Mother with compulsory primary immunization status in infants. It is based on the analysis results obtained chi-square test p = 0.009 (p <0.05). The study results are consistent with studies [8], whose results showed no relationship between maternal education level with the completeness of basic immunization in infants in Puskesmas Between Makassar is based on the analysis by the chi-square test was obtained p = 0.004 (p <0.05). The result of this study are also consistent with research Endah Ninggrum 2008, whose results showed no relationship between maternal education level with the completeness of basic immunization in infants at Health centre of Banduyono Boyolali based on the results of analysis with chi-square test was obtained p = 0.058 (p <0, 05).

Education is a process of a person develop skills, attitudes and forms of human behavior in the community where he lives, social processes, namely people exposed to environmental influences were elected and controlled (especially those coming from the school), so that he can gain or progressing social ability and the ability of individuals optimal [9].

Educational level someone would affect response coming from the outside so that a highly educated mother will give a more rational response to the information that is coming and will think the extent to which benefits they might gain from the information they receive. Thus a good education will give you a good ability as well to someone's mother in making decisions about child health by bring the baby to the place of immunization service to be given basic immunization, while mothers with low education will have problems in the absorption of information so that knowledge possessed also lower the impact on health baby.

5.3. Employment Relations Mother With Mandatory Basic Immunization Status In Toddlers

Based on the results of the study showed no relations maternal employment status with compulsory primary immunization in infants. It is based on the analysis results obtained chi-square test p = 1.000 (p> 0.05). Results of this study are not consistent with research [10] which showed no relation between maternal employment status of basic immunization in infants in the Medak village health centre , Muara Bayung Lencir, 2013, through data analysis statistical test of chi-square p = 0.017 (p <0.05). The work is a kind of daily activities are performed to earn [11]. For women workers they are housewives difficult to slip from family. environment have the burden and obstacle heavier than the fellow male. In meaning women should be used to resolve family affair, husband, children and matters relating to domestic affairs, including child immunization affairs.

Differences in the results with previous studies by authors in reference [10] estimated for the different environments. Government and private participation in the study will strongly support health activities. For example, mothers who work and have children can be given permission / time to be able to bring her baby in immunization. Other than these factors can be caused affordability of immunization service points located around the working environment.

5.4. Relationship Resources with Mandatory Basic Immunization Status In Toddlers

Based on the results of the study showed no effect between the state resources and compulsory primary immunization in infants. It is based on the analysis results obtained chi-square test p = 0.003 (p <0.05). The source of information is everything becomes an intermediary in conveying information, stimulate the mind, and the ability to gain knowledge [11]. Ease to obtain a person's information can accelerate acquire new knowledge. Source of information on immunization can be obtained from the mother's health workers through training and education that will increase knowledge of the mother. Mother's knowledge about the complete basic immunization is the result of the mother know about what kind of immunization and its benefits for the baby. This is important because it is expected that the mother did not just come to the place of health services such as Posyandu for weighing and immunizing babies but expected a mother should also understand and know what benefits would be obtained if their children weighed and immunized.

Results of this study is thought to occur because of the lack of information obtained by the mother of the things about the information on the immunization of health. Health officer is meant here is the officer who has a background in health education in charge of providing health care, education, training, counseling on health particularly regarding information about immunization.

5.5. Relationship With Mother Knowledge Level Mandatory Basic Immunization Status In Toddlers

Based on the results of the study showed no effect between the level of knowledge of mothers with basic compulsory immunization status in infants. It is based on the results of the analysis of the chi-square test was obtained ilia np = 0.009 (p <0.05). The results are consistent with research from [12] which showed no relation between mother knowledge with the status of basic immunization in infants in the Japanan village the District of Cawas Klaten through analysis of test data chi-square statistic was obtained p = 0.002 (p <0, 05).

Results of this study are also consistent with research of [13] which showed no relation between mother's knowledge to complete basic immunization in Health centre Kartasura Sukoharja District, through statistical analysis of test data was obtained chi-square p = 0.005 (p <0.05).

Knowledge is the result of know and it happens after people perform sensing to a particular object. Sensing occurs through human senses that the sense of sight, hearing, smell, taste and touch. Someone will take action and being driven by knowledge. This corresponds to earnings L.Green in Notoatmodjo Soekidjo book, which states that one of the determining factors behavior change is the presence of predisposing factors that included the mother's level of knowledge so that knowledge is less about immunization will make the mother does not carry the baby on time to be immunized.

5.6. Relationship Attitude Mother With Basic Immunization Status Completed In Toddlers

Based on the results of the study showed an effect between mother's attitude to the status of completion of compulsory basic immunization in infants. It is based on the analysis results obtained chi-square test p = 0.028 (p <0.05). The results are consistent with research by authors in reference [14] which states there is a correlation between parental attitudes toward completeness of basic immunization in toddlers in health centre of Swalekola wilayak Gandus indicated by the value of p = 0.000. Attitude containing motivation. Attitude is not simply record the past but also determines whether a person should be for and against something. Determine what is preferred, the expected and desired rule out what is what is undesirable and what to avoid. Attitude relatively settled, resulting from experience and not inborn but a result of learning, because that attitude can be strengthened or changed In the social psychology attitude is the tendency of individuals that can be determined from the ways of doing [11]. Attitudes towards an object can be interpreted that mothers with less attitude / negative has a better chance to have a negative behavior in the provision of basic immunization in infants and great attitude / positive have greater opportunities to have a positive attitude in the provision of basic immunization in infants [15].

6. Conclusion

Based on the results of research on factors affecting the status of basic immunization compulsory in infants in Harapan health centre, District East Sentani, Jayapura in 2015 concluded there was an effect of maternal age with the status of basic immunization mandatory in infants (p = 0.009), there is the effect of mother's education level with status of basic immunization mandatory in infants (p = 0.012), there was no effect of employment status of the mother with the status of basic immunization mandatory in infants (p = 1.000), there is the influence of resources to immunization status and compulsory primary (p = 0.003), There is the influence of the level of knowledge mothers with basic compulsory immunization status (p = 0.009).

7. Suggestion

Based on the conclusions given advice addressed to Harapan Health Centre to improve health promotion efforts, especially the improvement of health education information about the importance of compulsory primary immunization in infants.

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